

AMENDMENT(S) TO THE CLAIMS

123. (previously presented) A fiber optic cable installation structure comprising:

a surface defining a channel having a width of about 12 mm or less;

a cable disposed within the channel, said cable comprising a tube sized to fit within the channel and at least one optical waveguide disposed within said tube; and

a filling material overlying said cable and at least partially filling the channel, said filling material at least partially comprised of material not previously evacuated to form the channel.

124. (previously presented) The fiber optic cable installation structure according to Claim 123 wherein said cable has a diameter of about 10 mm or less.

125. (previously presented) The fiber optic cable installation structure according to Claim 123 wherein said surface defines the channel to have a width of about 7 mm or less.

126. (previously presented) The fiber optic cable installation structure according to Claim 125 wherein said cable has a diameter of about 5.5 mm or less.

127. (previously presented) The fiber optic cable installation structure according to Claim 123 wherein the surface defines the channel to have a depth of about 15 cm or less.

128. (currently amended) The fiber optic cable installation structure according to Claim 123 wherein said surface comprises a solid surface selected from the group consisting of asphalt, concrete, road surface, curbstone, and stone slab.

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129. (previously presented) The fiber optic cable installation structure according to Claim 123 wherein the ~~road~~ surface comprises a base course, a binder course disposed upon said base course and a surface course disposed upon said binder course, and wherein the surface defines the channel at least into the surface course.

130. (previously presented) The fiber optic cable installation structure according to Claim 123 wherein said surface comprises a paved surface defining at least one expansion joint which serves as the channel.

131. (previously presented) The fiber optic cable installation structure according to Claim 123 further comprising a release element disposed within the channel and extending lengthwise along said cable, said filling material also overlying said release element.

132. (previously presented) The fiber optic cable installation structure according to Claim 131 wherein said release element is formed of a material selected from the group consisting of metal, plastic and foam rubber.

133. (previously presented) The fiber optic cable installation structure according to Claim 131 wherein said release element is formed of a core surrounded by an elastic coating.

134. (previously presented) The fiber optic cable installation structure according to Claim 133 wherein the core of said release element is at least as large as said cable.

135. (previously presented) The fiber optic cable installation structure according to Claim 123 further comprising an

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intermediate covering disposed within the channel and overlying said cable, said filling material also overlying said intermediate covering.

136. (previously presented) The fiber optic cable installation structure according to Claim 135 wherein said intermediate covering comprises at least one insert selected from the group consisting of wires and sensors.

137. (previously presented) The fiber optic cable installation structure according to Claim 123 wherein said filling material is formed of a material selected from the group consisting of bitumen and a hot melt adhesive.

138. (previously presented) The fiber optic cable installation structure according to Claim 123 wherein said filling material includes a marker.

139. (previously presented) The fiber optic cable installation structure according to Claim 138 wherein the marker includes fibers selected from the group consisting of glass fibers and metal fibers.

140. (previously presented) The fiber optic cable installation structure according to Claim 123 further comprising at least one magnet disposed within the channel, said filling material also overlying said at least one magnet.

141. (previously presented) The fiber optic cable installation structure according to Claim 123 further comprising a device, disposed within the channel between said cable and said filling material, for holding said cable within the channel.

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142. (previously presented) The fiber optic cable installation structure according to Claim 123 further comprising a foam at least partially surrounding said cable, said filling material also overlying said foam.

143. (previously presented) The fiber optic cable installation structure according to Claim 123 further comprising a conductive cable disposed within the channel, said filling material also overlying said conductive cable.

144. (previously presented) A fiber optic cable installation structure comprising:

    a surface defining a channel;  
    a cable disposed within the channel, said cable comprising a tube and at least one optical waveguide disposed within said tube;

    a release element disposed within the channel and extending lengthwise along said cable; and

    a filling material overlying said cable and said release element and at least partially filling the channel.

145. (previously presented) The fiber optic cable installation structure according to Claim 144 wherein said release element is formed of a material selected from the group consisting of metal, plastic and foam rubber.

146. (previously presented) The fiber optic cable installation structure according to Claim 144 wherein said release element is formed of a core surrounded by an elastic coating.

147. (previously presented) The fiber optic cable installation structure according to Claim 146 wherein the core of said release element is at least as large as said cable.

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148. (previously presented) The fiber optic cable installation structure according to Claim 144 further comprising an intermediate covering disposed within the channel between said cable and said release element.

149. (previously presented) The fiber optic cable installation structure according to Claim 148 wherein said intermediate covering comprises at least one insert selected from the group consisting of wires and sensors.

150. (previously presented) The fiber optic cable installation structure according to Claim 144 wherein said surface defines the channel to have a width of about 12 mm or less.

151. (previously presented) The fiber optic cable installation structure according to Claim 150 wherein said cable has a diameter of about 10 mm or less.

152. (previously presented) The fiber optic cable installation structure according to Claim 144 wherein said surface defines the channel to have a width of about 7 mm or less.

153. (previously presented) The fiber optic cable installation structure according to Claim 152 wherein said cable has a diameter of about 5.5 mm or less.

154. (previously presented) The fiber optic cable installation structure according to Claim 144 wherein the surface defines the channel to have a depth of about 15 cm or less.

155. (currently amended) The fiber optic cable installation structure according to Claim 144 wherein said surface comprises a

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solid surface selected from the group consisting of asphalt, concrete, road surface, curbstone, and stone slab.

156. (previously presented) The fiber optic cable installation structure according to Claim 155 wherein the road surface comprises a base course, a binder course disposed upon said base course and a surface course disposed upon said binder course, and wherein the surface defines the channel at least into the surface course.

157. (previously presented) The fiber optic cable installation structure according to Claim 144 wherein said surface comprises a paved surface defining at least one expansion joint which serves as the channel.

158. (previously presented) The fiber optic cable installation structure according to Claim 144 wherein said filling material is formed of a material selected from the group consisting of bitumen and a hot melt adhesive.

159. (previously presented) The fiber optic cable installation structure according to Claim 144 wherein said filling material includes a marker.

160. (previously presented) The fiber optic cable installation structure according to Claim 155 wherein the marker includes fibers selected from the group consisting of glass fibers and metal fibers.

161. (currently amended) A fiber optic installation structure comprising:

an elongate body defining at least one lengthwise extending duct disposed within a laying channel defined by a solid surface;

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at least one optical waveguide disposed within at least one lengthwise extending duct defined by said elongate body; and a filling material overlying said elongate body and at least partially filling the laying channel.

162. (currently amended) The fiber optic installation structure according to Claim 161 wherein said elongate body is sized to fit within a the laying channel having a width of about 12 mm or less.

163. (currently amended) The fiber optic installation structure according to Claim 161 wherein said elongate body is sized to fit within a the laying channel having a width of about 7 mm or less.

164. (previously presented) The fiber optic installation structure according to Claim 161 wherein said elongate body comprises a plurality of barbs for engaging walls that define the channel.

165. (previously presented) The fiber optic installation structure according to Claim 161 wherein said elongate body is sheathed by said filling material.

166. (previously presented) The fiber optic installation structure according to Claim 161 wherein said elongate body defines a slot opening into the duct.

167. (previously presented) The fiber optic installation structure according to Claim 166 further comprising a cable inserted into the duct via the slot, said cable comprising a tube and said at least one optical waveguide disposed within said tube.

168 (cancelled)

169. (currently amended) The fiber optic cable installation structure according to Claim 161 wherein said solid surface is selected from the group consisting of asphalt, concrete, road surface, curbstone, and stone slab.

170. (previously presented) The fiber optic cable installation structure according to Claim 161 wherein said solid surface is a paved surface.

171. (currently amended) The fiber optic cable installation structure according to Claim 161 wherein the solid surface defines the laying channel to have a depth of about 15 cm or less.

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